



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/605,696	06/28/2000	Angus O. Dougherty	020366-075910US	6861
83809	7590	06/22/2010		
Qwest Communications International Inc. 1801 California Street, # 900 Denver, CO 80202			EXAMINER MILLS, DONALD L	
			ART UNIT	PAPER NUMBER
			2462	
			MAIL DATE	DELIVERY MODE
			06/22/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/605,696	Applicant(s) DOUGHERTY ET AL.	
	Examiner DONALD L. MILLS	Art Unit 2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 47-65 and 67-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 20010006509 A1), hereinafter referred to as Nguyen, in view of Rubinstain et al. (US 7,054,376 B1), hereinafter referred to as Rubinstain.

Regarding claim 47, 58, 62 and 69, Nguyen discloses a frequency division duplexing system, which accommodates symmetric and asymmetric channels, which comprises:

A distributed routing network comprising a distribution point in communication with at least one access point, each of the at least one access points having a coverage area adapted to service at least one of the plurality of subscriber units, wherein,

The distribution point is adapted to, receive the high-speed packetized information from a first subscriber unit, the high-speed packetized information being destined for a second subscriber unit in a coverage area serviced by a second of the distribution point comprising a host digital terminal distribution center, and

Forward the high-speed packetized information to the host digital terminal distribution center, the host digital terminal distribution center adapted to convert the high-speed packetized information to an optical format;

Art Unit: 2462

At least one access point in communication with the host digital terminal distribution center comprising an optical network unit adapted to receive the high-speed packetized information from the distributed routing network and convert the high-speed packetized information from the optical format to a second format;

A network interface device adapted to receive the high-speed packetized information from the optical network unit and forward the high-speed packetized information in the second format to the second subscriber unit

(Note, the Examiner interprets the claim as a traditional prior art system of a VDSL system connected to an ONU. Referring to Figures 2 and 3, a network connection path from the connection 103 and central office 75 to station sets, such as station set S2, illustrated in FIG. 2. In a VDSL system implementation of the present invention, the system may employ an optical fiber 120 to provide a communications path between the central office 75 and an optical network unit (ONU) 122. One or more optical fibers may employed to bring communications to within a relatively short range of a group of subscribers, where short range means a range that permits high speed data to be transmitted over conventional two-wire pairs within a cable. Signals are translated between the optical and two-wire media within the optical network unit 122. Under certain circumstances, for example, when a relatively large number of subscribers are located within a short range of the central office, that is no farther than the longest reach provided for by the system, the optical fiber 120 and optical network unit 122 may be eliminated. In implementations where the optical fiber 120 and optical network unit are employed, besides translation from optical to two-wire media, two-wire transmitters and receivers are employed, preferably within the optical network unit 122, to transmit signals to and receive signals from the

Art Unit: 2462

station sets S2, S3 . . . Sn, which are connected to the optical network unit 122 through drop cables DC2, DC3, . . . , DCn and a distribution cable 124. Transmitters and receivers at either end of the distribution cable 124 employ frequency division duplexing, with the channels defined according to those set forth in FIG. 1. The distribution cable includes binder groups which typically consist of twelve to twenty five two-wire twisted pairs and the potential for crosstalk is greatest within any of these binder groups, as opposed to inter-binder group crosstalk. See paragraphs 0032-0033.)

Nguyen does not disclose *a plurality of distribution points*.

Rubinstain teaches a high data rate Ethernet transport facility over digital subscriber lines, comprising an optical network unit 152 connected to multiple customer premises via the 100BaseS transport facility utilizing 100BaseS modems 156 and 158 (plurality of distribution points) (Referring to Figures 2 and 3, see column 9, line 66 to column 10, line 13).

The claim is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of Rubinstain. Nguyen teaches a traditional VDSL system connected to an ONU. Rubinstain teaches the 100BaseS protocol with multiple modems connected to end users. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the 100BaseS protocol of Rubinstain in the system of Nguyen. The claimed invention is merely the utilization of a well-known standard in a traditional system. In addition, the combination does not produce unexpected results. The updated system operates entirely as expected.

Further regarding claims 58 and 62, the primary reference further teaches *Storing data at a first distribution point comprising a host digital terminal distribution center* (Referring to

Art Unit: 2462

Figure 2, the central office comprises host computer which provides a video jukebox (stores data at a distribution point comprising a host digital terminal distribution center). See paragraph 0031).

Regarding claim 48, the primary reference further teaches *wherein the second optical format is compatible with copper wiring* (Referring to Figures 2 and 3, the VDSL network connected to the ONU is compatible with copper wiring. See paragraphs 0032-0033.)

Regarding claim 49, the primary reference further teaches *wherein the second optical format is compatible with coaxial cable* (Referring to Figures 2 and 3, the VDSL network connected to the ONU is compatible with coaxial cable. See paragraphs 0032-0033.)

Regarding claim 50, the primary reference further teaches *wherein the high-speed packetized information is provided through a VDSL service* (Referring to Figures 2 and 3, the VDSL network connected to the ONU. See paragraphs 0032-0033.)

Regarding claim 51, the primary reference further teaches *wherein the high-speed packetized information is provided through a fiber optic service* (Referring to Figures 2 and 3, the VDSL network connected to the ONU is compatible with fiber optic service. See paragraphs 0032-0033.)

Regarding claim 52, the primary reference further teaches *wherein the host digital terminal distribution center provides a plurality of video channels for distribution to the plurality of subscriber units* (Referring to Figures 2 and 3, video data service is supported via channels for subscribers. See paragraph 0031-0032.)

Regarding claim 53, the primary reference further teaches *wherein at least one of the plurality of subscriber units comprises is-a mobile device in communication with the at least one*

Art Unit: 2462

access point the distributed routing network through a wireless connection (Referring to Figures 2 and 3, although illustrating a wireline network a wireless network application is also disclosed. See paragraphs 0032-033 and 0037.)

Regarding claim 54, the primary reference further teaches *wherein at least one of the subscriber units comprises-is a mobile device in communication with the distributed routing network interface device through a land line wired connection* (Referring to Figures 2 and 3, although illustrating a wireline network a wireless network application is also disclosed. See paragraphs 0032-033 and 0037.)

Regarding claim 55, the primary reference further teaches *wherein the network interface device is a set-top box located at the subscriber premises* (Referring to Figures 2-4, the ONU (set-top box) comprises an encoder/decoder in a device for communication with the network. See paragraph 0034.)

Regarding claim 56, the primary reference further teaches *wherein the network interface device is a gateway at the subscriber premises adapted to forward the high-speed packetized information to the subscriber premises*(Referring to Figures 2-4, the ONU (gateway) comprises an encoder/decoder in a device for communication with the network. See paragraph 0034.)

Regarding claim 57, the primary reference further teaches *wherein the network interface device is a decoder* (Referring to Figures 2-4, the ONU comprises an encoder/decoder in a device for communication with the network. See paragraph 0034.)

Regarding claim 59, the primary reference further teaches *wherein the data stored on the host digital terminal video distribution center comprises a plurality of information channels*

Art Unit: 2462

(Referring to Figure 2, the central office comprises host computer which provides a video jukebox providing a number of channels for distribution. See paragraph 0031)

Regarding claim 60, the primary reference further teaches *wherein the host digital terminal video distribution center is adapted to receive a request from at least one of the plurality of subscriber units to access one of the plurality of information channels* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which provides video data via channels to subscribers. See paragraph 0031)

Regarding claim 61, the primary reference further teaches *wherein the host digital terminal video distribution center is adapted to: respond to the request from the at least one of the plurality of subscriber units to access one of the plurality of information channels; and deliver the one of the plurality of information channels to the one of the plurality of subscriber units* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service. See paragraph 0031.)

Regarding claim 63, the primary reference further teaches *processing a request at the at least one of a plurality of subscriber units to access the data stored at the host digital terminal distribution center; and determining if the data stored at the host digital terminal distribution center is available for distribution* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service. See paragraph 0031.)

Regarding claim 64, the primary reference further teaches *wherein processing a request at the at least one of a plurality of subscriber units to access the data stored at the host digital*

Art Unit: 2462

terminal distribution center comprises determining that the at least one of a plurality of subscriber units requesting the access is within the coverage area of the host digital terminal distribution center (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service and servicing subscribers within its subscription range. See paragraph 0031)

Regarding claim 65, the primary reference further teaches *wherein processing a request at the at least one of a plurality of subscriber units to access the data stored at the host digital terminal distribution center comprises receiving a message from the at least one of a plurality of subscriber units* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service. See paragraph 0031.)

Regarding claim 67, the primary reference further teaches *determining that the at least one of the plurality of subscriber units is no longer accessing the data; terminating transmission of the data; and noting that the at least one of the subscriber units is no longer receiving the data* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service and service is terminated when the subscriber no longer accesses the data, by definition of video jukebox. See paragraph 0031)

Regarding claim 68, the primary reference further teaches *at least one of the host digital terminal distribution center and optical network unit comprises a video distribution center, the video distribution center adapted to receive and relay requests between a video supplier and at least one of a customer gateway and one of the plurality of subscriber units* (Referring to Figure

Art Unit: 2462

2, the central office comprises host computer which provides a video jukebox. See paragraph 0031.)

. Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen (US 20010006509 A1) in view of Rubinstain (US 7,054,376 B1) in further view of Saito et al. (US 6,751,221 B1), in view of Saito.

Regarding claim 66 as explained in the rejection of claim 62, Nguyen discloses all of the claim limitations of claim 62 (parent claim).

Nguyen does not disclose *transmitting a dummy address as the destination for the data, the dummy address permitting one or more subscriber units to request and terminate a video channel from the host digital terminal distribution center without disrupting the distribution of the same video channel to any other subscriber units.*

Saito discloses a data transmitting node and network inter-connection node suitable for a home network environment, in which a dummy value is entered for the unresolved destination address, functionally equivalent to the claimed dummy address because the additional language is merely intended-use language (See column 29, lines 5-8).

Art Unit: 2462

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the dummy value of Saito in the system of Nguyen. One of ordinary skill in the art at the time of the invention would have been motivated to do so to discard unwanted frames as taught by Saito (See column 29, lines 9-21).

Response to Arguments

5. Applicant's arguments with respect to claims 47-69 have been considered but are moot in view of the new ground(s) of rejection. Note, the Applicant should amend the claims to more directly reflect the instant invention. For example, another possible interpretation of the claims would permit an anticipation of the claims by a traditional SONET/SDH network. SONET/SDH network utilize a number of distribution points, transport packetized data and provide optical/electrical conversion.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2462

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DONALD L. MILLS whose telephone number is (571)272-3094. The examiner can normally be reached on 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Donald L Mills/
Primary Examiner, Art Unit 2462